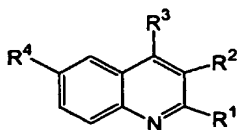


WHAT IS CLAIMED IS:

1. Quinoline derivative of formula 1, or its pharmaceutically acceptable salt of the same:

formula 1



wherein,

R¹ is piperazinyl, 2-methylpiperazinyl, diazepinyl or N-methyl-N-(2-N'-methylamino)ethylamine group;

R² is H, halogen atom, C₁~C₄ alkyl or C₁~C₄ haloalkyl;

R³ is H, halogen atom, vinyl or furanyl group; and

R⁴ is halogen atom or nitro group.

2. The derivative of claim 1, wherein R¹ is 2-methylpiperazinyl, diazepinyl or N-methyl-N-(2-N'-methylamino)ethylamine;

R² is H, bromine, methyl, ethyl, propyl, chloropropyl or fluoropropyl;

R³ is H, chlorine, bromine, iodine, vinyl or 2-furanyl group; and

R⁴ is chlorine, bromine, iodine, or nitro group.

3. The derivative of claim 1, wherein the derivative is selected from the group consisting of:

3-methyl-6-nitro-2-piperazin-1-yl-quinoline;

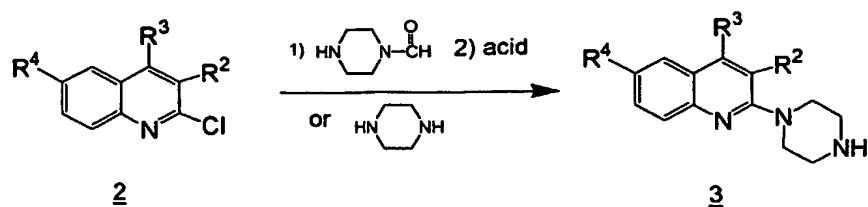
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ART 34 AMDT

3-ethyl-6-nitro-2-piperazin-1-yl-quinoline;
6-nitro-2-piperazin-1-yl-3-quinoline;
3-(3-chloropropyl)-6-nitro-2-piperazin-1-yl-quinoline;
3-(3-fluoropropyl)-6-nitro-2-piperazin-1-yl-quinoline;
5 6-iodo-2-pipeerazin-1-yl-quinoline;
6-bromo-2-piperazine-1-yl-quinoline;
6-chloro-2-piperazin-1-yl-quinoline;
3-bromo-6-nitro-2-piperazin-1-yl-quinoline;
4-chloro-6-nitro-2-piperazin-1-yl-quinoline;
10 4-bromo-6-nitro-2-piperazin-1-yl-quinoline;
4-iodo-6-nitro-2-piperazin-1-yl-quinoline;
6-nitro-2-piperazin-1-yl-4-vinylquinoline;
4-(2-furanyl)-6-nitro-2-piperazin-1-yl-quinoline;
2-(3-methylpiperazin-1-yl)-6-nitroquinoline;
15 2-(N-methyl-N-(2-N'-methyldamino)ethyl)amino-6-
nitroquinoline; and
2-[1,4]diazepin-1-yl-6-nitoquinoline.

4. A method for preparing the derivative of formula 1 of
20 claim 1 comprises:

- 1) substituting the quinoline compound of formula 2 with
1-piperazinecarboxaldehyde;
- 2) treating thus obtained mixture with acid compound or
substituting it with piperazine followed by
25 introducing piperazinyl group at 2-position of
quinoline compound of formula 2:

Reaction Scheme 1



wherein, R^2 is H, bromine, methyl, ethyl, propyl, chloropropyl, or fluoropropyl group;

5 R^3 is H, chlorine, or bromine;

R^4 is chlorine, bromine, iodine, or nitro group.

10 5. A pharmaceutical composition comprising the quinoline derivative of the formula 1 as an effective ingredient for preventing or treating serotonin-related mental disorder.

6. The composition of claim 1, wherein the mental disorder is a depression.